

Serial No.: 10/573,928
Art Unit: 2621

PU030162
Customer No. 24498

Remarks/Arguments

The Office Action mailed May 28, 2008 has been reviewed and carefully considered.

Claims 1-17 are pending in this application.

Reconsideration of the above-identified application, as herein amended and in view of the following remarks, is respectfully requested.

Claims 1-17 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent Publication No. 2006/0051068 to Gomila. Since the present invention and the cited reference are invented by the same inventor, applicant completely understands the teachings of both the present invention and the cited reference. Applicant respectfully submits that the Examiner's interpretation of the Gomila reference is not accurate.

The Gomila reference discloses a decoder apparatus and method for smoothing artifacts created during error concealment. According to Gomila, the description of Figure 2 at paragraphs 0013 and 0014 discusses the steps implemented to accomplish error concealment and adjust the parameters of the deblocking filter 22. As shown, when errors are detected (120) a determination is made (140) as to whether the received macroblock has been intra-coded. In the event it is intra-coded, spatial concealment (160) is performed, and in the event it is not intra-coded, temporal concealment (180) is performed. Once the concealment is performed, the deblocking parameters are adjusted (200). [*emphasis added*]

In rejecting claims 1 and 10, the Examiner states that Gomila discloses a method for temporal concealment, and then asserts paragraph 0026 which describes another

Serial No.: 10/573,928
Art Unit: 2621

PU030162
Customer No. 24498

technique for spatial error concealment. Important to note is that the error concealment of the cited Gomila reference is applied within the decoding loop before deblocking in order to avoid the propagation of errors. In fact, there is no discussion at all in Gomila describing the actual error concealment method used. The smoothing of artifacts created during the error concealment process is the only concept disclosed.

In rejecting claims 1 and 10, the Examiner asserts, *inter alia*, that Gomila discloses, "...scaling the co-located motion vector in accordance with a picture distance ([0029], scaling the co-location motion vector into half or quarter pixel)..." Applicant respectfully asserts that Gomila makes no such disclosure at paragraph 0029 or elsewhere. In fact, paragraph 0029 discusses global motion as one of the possible motion vectors for consideration in a temporal concealment environment. No discussion of "scaling" is remotely suggested by the citation, nor would one of ordinary skill in the art rely on such discussion at paragraph 0029 to arrive at applicant's claimed scaling step.

Furthermore, the Examiner asserts that Gomila shows "determining a co-located motion vector for the co-located macroblock", again citing paragraph 0026. The description at paragraph 0026 of Gomila refers to a spatial error concealment technique and does not disclose or suggest this concept of determining a co-located motion vector for the co-located macroblock, as originally claimed.

One of ordinary skill would clearly recognize in reading the Gomila reference that there can be no such discussion or suggestion as to the determination of a co-located motion vector as a result of Gomila's failure to disclose the scaling of the co-located motion vector in accordance with a picture distance. It thus follows that Gomila fails to disclose the concept of predicting the at least one missing or corrupted data by motion

Serial No.: 10/573,928
Art Unit: 2621

PU030162
Customer No. 24498

compensating data from both the first previously transmitted picture and a second previously transmitted reference picture in accordance with the scaled co-located motion vector.

In view of the above, it is respectfully asserted that Gomila fails to anticipate or even render obvious applicant's claimed invention as set forth in independent claim 1 and 10.

Claims 1-17 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Matsumura et al. (USP 6,489,996) in view of Tourapis et al. (7,003,035). Matsumura et al. discloses a moving-picture decoding method and apparatus calculating motion vectors to reduce distortion caused by error propagation. In reviewing Matsumura et al. and the Examiner's application of the same, applicant respectfully disagrees with the Examiner's interpretation of the same. The invention disclosed in Matsumura et al. addresses the following question: If the motion vector of the macroblock being decoded points to a macroblock previously affected by transmission errors, what should the decoder do? (See discussion of Figure 8 starting Col. 5, line 57 – Col 7, line 33).

In stark contrast, the present invention addresses the following question: If the motion vector of the macroblock being decoded points to a macroblock previously affected by transmission errors, and no information about motion vectors can be decoded, what should the decoder do? Thus, it is obvious to see that the present invention is directed to a different problem than being solved by Matsumura et al., and solves said different problem in a completely different way than proposed by Matsumura et al..

Matsumura et al. provides a method to derive the corrupted reference pixels in the reference macroblock. Thus, in order to do this, one of skill in the art will recognize that

Serial No.: 10/573,928
Art Unit: 2621

PU030162
Customer No. 24498

Matsumura et al. clearly relies on the fact that motion vectors are always available and that the corrupted data is pixel data. This is contrary to the teachings of the present invention.

The present invention as originally claimed, does not rely on the presence of motion vectors, and in fact clearly recites in claim 1, *inter alia*, "...determining a co-located motion vector in accordance with a picture distance;...". Claim 10 recites, *inter alia*, "...determining a reference index and a motion vector for the co-located macroblock;..."

The Tourapis et al. describes a video encoding technique that takes advantage of correlations within and among frames. The examiner has cited the Tourapis et al. al patent for the purpose of teaching the H.264 coding standard and for the purpose of selecting results in accordance with a boundary scan strength value of deblocking as taught by this coding standard.

However, like the Matsumura et al. patent, the Tourapis et al. patent fails to address the problem of what the decoder should do upon encountering a motion vector unable to be decoded because of transmission errors, and having no information about motion vectors that can be decoded. Thus, the combination of Matsumura et al. and Tourapis et al. would not render obvious applicant's claimed invention as set forth in claims 1 and 10 and the claims that depend therefrom.

Conclusion

In view of the foregoing amendments to the claims and the accompany remarks, applicants solicit entry of this amendment and allowance of the claims. If, however, the Examiner believes such action cannot be taken, the Examiner is invited to contact the

Serial No.: 10/573,928
Art Unit: 2621

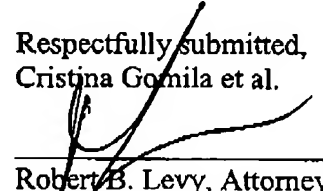
PU030162
Customer No. 24498

applicants' attorney at (609) 734-6820, so that a mutually convenient date and time for a telephonic interview may be scheduled.

It is believed that no fee is due with regard to the filing of this revised response; however, if there is a fee due, please charge the amount due, to Deposit Account No. 07-0832.

Respectfully submitted,
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